

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claims 1-196 (Cancelled).

Claim 197 (Currently amended). A device for arraying a plurality of cells into discrete and predetermined locations for further experimentation, said device comprising a substrate having an essentially flat surface, wherein a plurality of magnets are contained in said substrate, wherein said plurality of magnets are arrayed in said substrate such that each magnet defines a plurality of magnetic receptacles, wherein each of said plurality of magnetic receptacles comprises a localized magnetic field gradient to define a magnetic area, wherein said magnetic area is situated on the surface of the substrate in a predetermined location discrete from other magnetic areas, wherein the plurality of magnetic areas defined by said plurality of magnets are disposed in a two-dimensional array on the substrate, wherein said localized magnetic field gradient is localized to can immobilize one to about five cells within said each of said plurality of magnetic receptacles areas, and wherein said each of said plurality of magnetic receptacles is situated in, on or associated with said substrate in a predetermined location discrete from other of said plurality of magnetic receptacles and wherein said cells are associated with magnetic material at the time that said cells are immobilized within said plurality of magnetic receptacles areas and wherein said magnetic receptacles are disposed in a two-dimensional array on the substrate.

Claim 198 (Canceled).

Claim 199 (Original). The device of claim 197 wherein said cells are hybridoma cells.

Claim 200 (Original). The device of claim 197 wherein the substrate is fabricated from a material selected from the group consisting of glass, urethane, rubber, molded plastic, polymethylmethacrylate, polycarbonate, polytetrafluoroethylene, polyvinylchloride, polydimethylsiloxane, and polysulfone.

Claim 201 (Canceled).

Claim 202 (Currently amended). The device of claim 197 further comprising a layer on top of said substrate wherein said layer has micro-gaps positioned over said magnetic ~~receptacles~~ areas.

Claim 203 (Currently amended). The device of claim 197 further comprising a cell isolation device, wherein said cell isolation device comprises a membrane containing a plurality of wells ~~that matching periodicity with said~~ the plurality of the magnetic ~~receptacles~~ areas, such that ~~when said cell isolation device and is mated with~~ placed on said substrate, ~~and wherein~~ said cell isolation device is capable of isolating said one to about 5 cells immobilized in one of said plurality of magnetic ~~receptacles~~ areas from other of said cells immobilized in said other of said plurality of magnetic ~~receptacles~~ areas arrayed within the cell isolation device.

Claim 204 (Currently amended). The device of claim 203, wherein wells of the cell isolation device have micro through-holes ~~and micro through-hole walls~~.

Claim 205 (Original). The device of claim 204, wherein the micro through-holes comprise a semi-permeable membrane opposite the substrate, wherein the membrane restricts cell movement between wells and is permeable to fluid.

Claim 206 (Currently amended). The device of claim 205 wherein at least one of the walls of the micro through-holes ~~walls~~ are canted or perpendicular to the substrate.

Claim 207 (Currently amended). The device of claim 203, wherein said plurality of magnetic areas further comprises immobilized cells associated with said magnetic material, wherein such that when the cell isolation device is mated to placed on said substrate ~~such that, said cells are capable of being transferred from said plurality of magnetic areas to said cell isolation device, and~~ when the substrate is removed, the cells remain in the cell isolation device.

Claim 208 (Currently amended). The device of claim 207 wherein ~~said plurality of magnetic receptacles further comprise immobilized cells associated with said magnetic material wherein said plurality of magnetic receptacles are mated to said cell isolation device such that said cells~~

are capable of being transferred from said plurality of magnetic ~~receptacles~~ areas to said cell isolation device by centrifugal force ~~such that a substantial number of said cells is transferred to said cell isolation device.~~

Claim 209 (Original). The device of claim 197 wherein the substrate is coated with a hydrophobic agent.

Claim 210 (Original). The device of claim 209 wherein the hydrophobic agent is selected from the group consisting of teflon, perfluorinated plastic, polyethylene glycol, ethylene oxide-terminated trichlorosilane, and hydrophobic alkyltrichlorosilane.

Claim 211 (Original). The device of claim 197 wherein the substrate is coated with an anti-coagulant.

Claim 212 (Original). The device of claim 211 wherein the anti-coagulant is selected from the group consisting of heparin, heparin fragments, tissue-type plasminogen activator (tPA), urokinase (uPA), Hirudan, albumin, anti-platelet receptor GPIB antibodies, anti-platelet receptor GPIIb/IIIa antibodies, and anti-von Willebrand Factor (vWF) antibodies.

Claim 213 (Currently amended). The device of claim 197 wherein at least one of the magnetic receptacle comprises magnets is a permanent magnet.

Claim 214 (Currently amended). The device of claim 197 wherein at least one of the magnetic receptacle comprises a magnets is made of highly-magnetically-permeable magnetic material.